

REMARKS

Applicants express appreciation to the Examiner for consideration of the subject patent application. This communication is in response to the Office Action mailed August 28, 2008, in which all pending claims (claims 1, 3-6, 10-17, 17-22, and 26-41) were rejected under 35 U.S.C. § 103(a) over a number of references.

The specific rejections under § 103 set forth in the Office Action were as follows:

(1) Claims 1, 3, 4, 10, 11, 14, 16, 17, 19, 22, 26, and 27 were rejected as being unpatentable over JP 200-108497 (hereinafter "Miyamura") in view of JP 2001-049155 (hereinafter "Iijima") and JP 2003-011353 (hereinafter "Allen").

(2) Claims 5, 6, 15, 21, 28, 31-35, and 38-41 were rejected as being unpatentable over Miyamura in view of Iijima and Allen as applied to claims 1 and 17, and further in view of JP 2002-207275 (hereinafter "O'Connor").

(3) Claims 12 and 13 were rejected as being unpatentable over Miyamura in view of Iijima and Allen as applied to claim 10, and further in view of U.S. Patent No. 5,624,484 (hereinafter "Takahashi").

(4) Claim 29 was rejected as being unpatentable over Miyamura in view of Iijima and Allen as applied to claim 17, and further in view of U.S. Patent Publication No. 2003/0198885 (hereinafter "Tamagawa").

(5) Claim 30 was rejected as being unpatentable over Miyamura in view of Iijima and Allen as applied to claim 17, and further in view of JP 02026747 (hereinafter "Deguchi").

(6) Claims 36 and 37 was rejected as being unpatentable over Miyamura in view of Iijima, Allen, O'Connor as applied to claim 32, and further in view of Takahashi.

It is respectfully submitted that the presently pending claims be reconsidered and allowed.

Claim Rejections - 35 U.S.C. § 103

The Examiner rejected all claims under 35 U.S.C. § 103(a) as being unpatentable over a number of combinations of prior art references, as shown above. Each rejection is based at least upon the combination of Miyamura in view of Iijima and Allen.

The present claims are directed to a system (claim 1) for printing durable ink-jet ink images, including offset media, ink-jet ink having a pigment colorant, a fixer composition, and a calendaring device. The ink-jet ink is configured to be ink-jetted onto the offset media. The fixer composition includes a crashing agent that is reactive with a component of the ink-jet ink and is configured to be overprinted or underprinted on the offset media with respect to the ink-jet ink. The calendaring device is configured for applying pressure and heat to offset media once the ink-jet ink is ink-jetted thereon. The pressure is mechanical pressure applied at from 500 psi to 3000 psi, and the heat to be applied is from 20-90°C.

Claim 17 is directed to a method of printing images on offset media, including ink-jetting an ink-jet ink including a pigment colorant onto offset media to form a printed image, underprinting or overprinting a fixer composition with respect to the ink-jet ink, and applying pressure to the printed image such that a physical property of the printed images is altered by the pressure, and applying heat to the printed image. The heat applied is from 20-90°C and the pressure is mechanical pressure applied at from 500 to 3000 psi. As before, the fixer composition includes a crashing agent that is reactive with a component of the ink-jet ink.

The final independent claim, claim 31, is directed to a system for printing durable ink-jet ink images. The system includes offset media, an ink-jet ink including a pigment colorant, an overcoat composition, and a calendaring device. The ink-jet ink is configured to be ink-jetted onto the offset media. The overcoat composition includes a liquid vehicle having latex particulates dispersed therein and is also configured to be overcoated with respect to the ink-jet ink. The latex particulates are present in the overcoat composition at from 0.1 wt% to 15 wt%. The calendaring device is configured for applying pressure and heat to offset media once the ink-jet ink is ink-jetted thereon. The pressure is mechanical pressure applied at from 500 psi to 3000 psi, and the heat to be applied is from 20-90°C.

In the rejections, the Examiner relies on Miyamura as teaching an apparatus and method comprising offset media, ink-jet ink being configured to be ink-jetted onto offset media, and a calendaring device. By the Examiner's admission, Miyamura fails to teach an ink-jet ink including a pigment colorant comprising latex from 0.1 wt% to 10 wt%, wherein the latex particulates are predominately from 20 nm to 500 nm size and a fixer composition including a crashing agent from 0.1 wt% to 10 wt% that is reactive with a component of the ink-jet ink,

wherein the fixer composition being configured to be overprinted or underprinted on the offset media with respect to the inkjet ink and wherein the crashing agent is selected from the group consisting of cationic polymers, multivalent metal ions or ionic groups, acids and combinations thereof, and wherein the crashing agent is a cationic polymer selected from the group consisting of polyvinylpyridines, polyalkylaminoethyl acrylates, polyalkylaminoethyl methacrylates, poly(vinyl imidazole), polyethyleneimines, polybiguanides, polyguanides, polyvinylamines, polyallylamines, polyacrylamines, polyacrylamides, polyquaternaryamines, cationic polyurathenes, aminocelluloses, polysacchride amines, and combinations thereof.

Iijima is cited for teaching an ink-jet ink including a pigment colorant comprising latex. The Examiner reasons that it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the invention taught by Miyamura to replace the ink-jet ink thereof with an ink-jet ink with a pigment as taught by Iijima for the purpose of obtaining an image with high waterproof and abrasion resistance thereby providing good ink preservation. The Examiner further admits that Iijima fails to teach a fixer composition including a crashing agent from 0.1 wt% to 10 wt%, that is reactive with a component of the ink, said fixer composition being configured to be overprinted or underprinted on the offset media with respect to the ink jet ink, and wherein the crashing agent is selected from the group consisting of cationic polymers, multivalent metal ions or ionic groups, acids and combinations thereof and wherein the crashing agent is a cationic polymer selected from the group consisting of polyvinylpyridines, polyalkylaminoethyl acrylates, polyalkylaminoethyl methacrylates, poly(vinyl imidazole), polyethyleneimines, polybiguanides, polyguanides, polyvinylamines, polyallylamines, polyacrylamines, polyacrylamides, polyquaternaryamines, cationic polyurathenes, aminocelluloses, polysacchride amines, and combinations thereof.

Allen is then cited as teaching an overcoat fixer composition including a crashing agent that is reactive with a component of an ink-jet ink, and where the crashing agent is selected from the group consisting of polyvinylpyridines, polyalkylaminoethyl acrylates, polyalkylaminoethyl methacrylates, poly(vinyl imidazole), polyethyleneimines, polybiguanides, polyguanides, polyvinylamines, polyallylamines, polyacrylamines, polyacrylamides, polyquaternaryamines, cationic polyurathenes, aminocelluloses, polysacchride amines, and combinations thereof. The Examiner reasons that it would have been obvious at the time the invention was made to a person

having ordinary skill in the art to modify the invention taught by Miyamura to include a fixer composition with a crashing agent as taught by Allen for the purpose of reducing condensation thereby improving print quality.

Respectfully, the Applicant finds a number of errors in the rejections put forth by the Examiner. First, the rejection, and all rejections based thereon, are based on impermissible hindsight wherein the Examiner utilized the present disclosure as a roadmap for forming the rejection. Second, the combination of Miyamura in view of Iljima and Allen does not present a finite number of identified, predictable solutions. Finally, even if the combination of Miyamura in view of Iljima and Allen is proper, the combination fails to present a *prima facie* case of obviousness for failure to teach each and every element of the claims.

The Applicant respectfully asserts the Examiner used improper hindsight to reconstruct the instantly claimed invention while using the Applicant's specification as a roadmap. The court has stated that the Applicant's specification cannot be the basis for motivation, i.e., no hindsight reconstruction. Yamououchi Pharmaceutical Co., Ltd. v. Danbury Pharmacal, Inc., 231 F.3d 1339, 56 U.S.P.Q.2d 1641 (Fed. Cir.), reh'g denied, 2000 U.S. App. LEXIS 34047 (2000). Accordingly, if a prior art reference is sought to provide a specific element of a claim with the use of hindsight, any rejection based thereon is improper and should be withdrawn. The Examiner has purposefully selected references and elements within the references based on the present specification. One of ordinary skill in the art would not find reason to combine the references in the manner suggested by the Examiner when considering each reference wholly. As such, the rejections based on Miyamura in view of Iljima and Allen, and all rejections depending therefrom, are improper.

Additionally, as taught in KSR, "When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp." KSR International Co. v. Teleflex Inc., et al., 550 U.S. 398, (2007). Miyamura in view of Iljima and Allen present far more than a finite number of identified, predictable solutions. The present invention inherently relies on the chemical arts for compatibility and reactivity of at least the media, the ink, and the fixer. Chemical arts are generally recognized as less predictable than other fields of art. Further, each of the references presents a number of variables, which in turn

increase the potential number of identifiable solutions. As such, the combination of references fails to provide a finite number of identified, predictable solutions, and therefore fails to be obvious.

Even if the combination is proper and found to not rely on hindsight, the rejection still fails to uphold a *prima facie* case of obviousness for failure to teach each and every element. The Examiner has cited Miyamura as teaching offset media. The Applicant has found reference to media in Miyamura, but is unable to ascertain how or where the Examiner found teaching of offset media in the reference. As noted in the present disclosure, “commercial offset coated papers are significantly different than office plain papers or ink-jet specific specialty media papers designed for ink-jet printing.” See p. 1, ln. 25-28. Such distinctions are due typically to the surface, coatings, and are described and specifically defined in the body of the present application (see, e.g., p. 1, ln. 25 – p. 2, ln. 9, and p. 3, ln. 21-27.

Additionally, the fixer selected from Allen is a fixer for inks and media of Allen. The Examiner has clearly selected the ink of Iijima in combination with the composition of Allen. The claims are specific to requiring a fixer composition including a crashing agent that is reactive with a component of the ink-jet ink. There is no reason to believe, nor is it alleged by the Examiner, that the combination as presented in the rejection includes a fixer composition including a crashing agent that is reactive with a component of the ink-jet ink. As such, the combination of Miyamura in view of Iijima and Allen fails to teach each and every element of the present claims, and thus fails to present a *prima facie* case of obviousness. Therefore, removal of the rejection is requested.

All rejections rely on the combination of Miyamura in view of Iijima and Allen in combination with one or more additional references to provide additional claim elements. As such, all of the rejections fail for any and all of the reasons recited above. Particularly, the rejections are improper for use of hindsight; the combinations do not present a finite number of identified, predictable solutions; and the combinations fail to present each and every element as claimed, and therefore fail to uphold a *prima facie* case of obviousness.

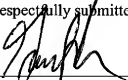
CONCLUSION

In light of the above, Applicants respectfully submit that pending claims are in condition for allowance. Therefore, Applicants request that the rejections be withdrawn, and that the claims be allowed and passed to issue. If any impediment to the allowance of these claims remains after entry of this Amendment, the Examiner is encouraged to call the undersigned so that such matters may be resolved as expeditiously as possible.

The Commissioner is hereby authorized to charge any additional fee or to credit any overpayment in connection with this Amendment to Deposit Account No. 08-2025.

DATED this 26th day of November, 2008.

Respectfully submitted,



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